

SIPHONAPTERA FROM EAST AFRICA.

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(With 7 text-figures.)

THE specimens here dealt with were received from Mr. G. H. E. Hopkins, Entomologist to the Department of Agriculture, Kampala, to whose successful activities we owe much valuable material of Siphonaptera and who himself is keenly interested in the study of these parasites.

1. *Xenopsylla robertsi* spec. nov. (text-figs. 60, 61).

Closely related to *X. brasiliensis* Baker 1904 and *X. hamula* Jord. 1925, agreeing with the former in the chaetotaxy of the body and legs and in the shape

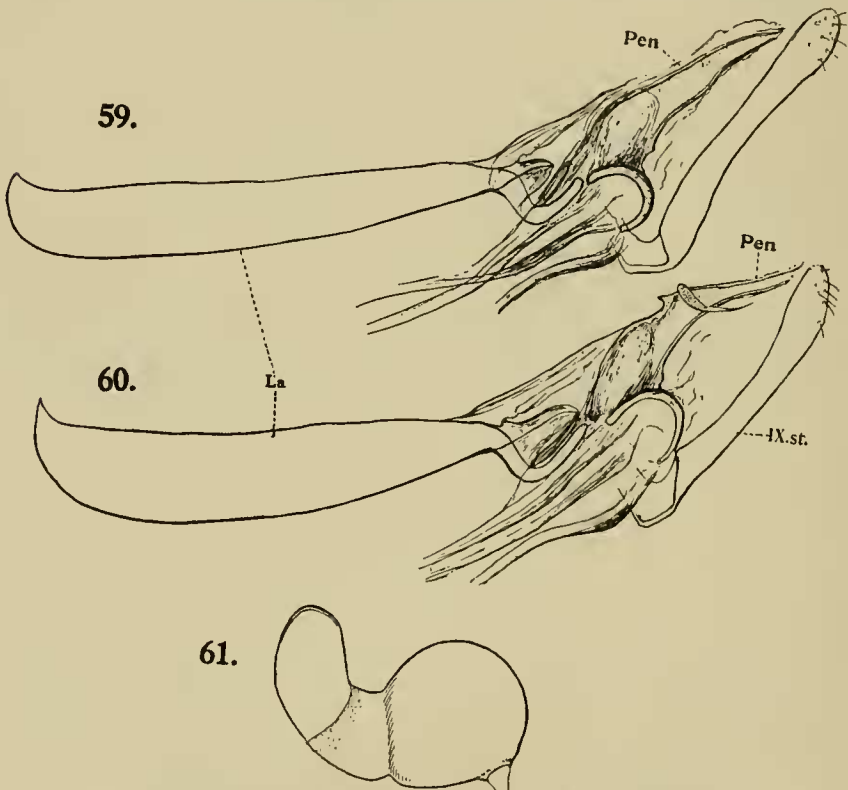


FIG. 59.—*Xenopsylla brasiliensis* ♂. FIG. 60.—*Xenopsylla robertsi* ♂.
FIG. 61.—*Xenopsylla robertsi* ♀.

of the external ♂ genital armature, and with the latter in the end-tube of the penis bearing a dorsal hook (text-fig. 60) and in the penis-plate (La) being broader than in *X. brasiliensis* (text-fig. 59). The ♀ differs from both allied species in the base of the tail of the spermathaca being less ventricose (text-fig. 61).

Mr. G. H. E. Hopkins drew my attention to the distinctions in the penis-plate and spermatheca, by which well-mounted specimens are recognizable without difficulty as belonging to *X. robertsi*, a name suggested by Mr. Hopkins as a small token of gratitude to the collector.

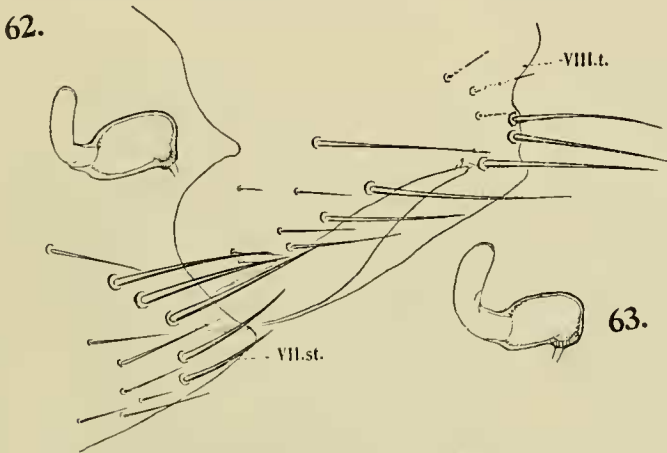
♂♀. Bristles on abdominal sternites (on the two sides together) in ♂: III to VI 6, VII 6 to 8; in ♀: III 7 or 8, IV 5 to 8, V 7 or 8, VI 8 or 9, VII 6 to 10 with an additional bristle on each side farther forward. In *X. hamula* the numbers are in ♂: III to VI 4, VII 2; in ♀: III to VI 6, VII 4.

A series of both sexes from Kerugoya, Kenya, off *Rattus rattus*, October 1934 (J. J. Roberts).

2. *Ctenophthalmus eumeces* J. & R. 1913 (text-figs. 62, 63).

♀. *Ctenophthalmus lycosius* J. & R., *Nov. Zool.*, xx, p. 556, text-fig. 26 (1913).

Described from the ♂ only (*l.c.*, p. 539, no. 23, text-fig. 19 (1913)). Mr. G. H. E. Hopkins has sent me two pairs with the request to describe the ♀. We have a



FIGS. 62-63.—*Ctenophthalmus eumeces* ♀.

series of ♀♀ in the collection from the same place, Nakuru, Kenya, agreeing with those sent by Mr. Hopkins and with the ♀ described and figured, *l.c.*, erroneously as that sex of *Ct. lycosius*, all these specimens being placed with *Ct. eumeces* in the collection. Our mistake was caused by the fact that the single ♀ was found on the same host as the ♂♂ of *Ct. lycosius*. The arrival of a series of ♂♂ and ♀♀, the former agreeing with *Ct. eumeces*, and the latter with the ♀ supposed to be that of *Ct. lycosius*, led us to compare the chaetotaxy of the ♂♂ of the two species, and we found that in *Ct. eumeces* the longest dorsal apical bristle of the hindtibia is one-fourth shorter than hindtarsal segment I (the bristle measured from base), whereas in *Ct. lycosius* the bristle is almost as long as hindtarsal segment I (14:15). The ♀♀ of *Ct. eumeces* agree herein with the ♂♂, and we may therefore assume that the ♀ of *Ct. lycosius* also agrees with its ♂ (and probably will turn out to differ also in other details from the ♀ of *Ct. eumeces*). As the spermatheca of *Ct. eumeces* figured (as *lycosius*) in *Ectoparasites*, i, p. 306 (1923), is distorted, we take the opportunity to give sketches of this organ from two other specimens (text-figs. 62, 63); in fig. 62 the tail is too short, being

somewhat bent sideways in the specimen and therefore foreshortened; the head of the spermatheca varies to some extent in size, as shown in the figures. The seventh sternite (VII. st.) also is not quite constant, as was to be expected, but the general contour of the segment is the same in all specimens, the lateral angle being less pointed in some specimens than in our figure (text-fig. 62) and the margin of the segment at some distance below the projection less evenly in-curved. The bristles of this segment are stouter in some specimens than in others, and their number is slightly variable. The two apical bristles of VIII. t. are marginal, the upper being a little shorter than the lower.

3. *Ctenophthalmus singularis* spec. nov. (text-figs. 64, 65, 66).

Unique among the African species of *Ctenophthalmus* in the movable sclerite of the clasper being terminally divided by a sinus into two rounded processes and in the eighth tergite of ♀ bearing basally each side an incrasation like a pair of brackets. In the shortness of the ventral arm of IX. st. of ♂ the

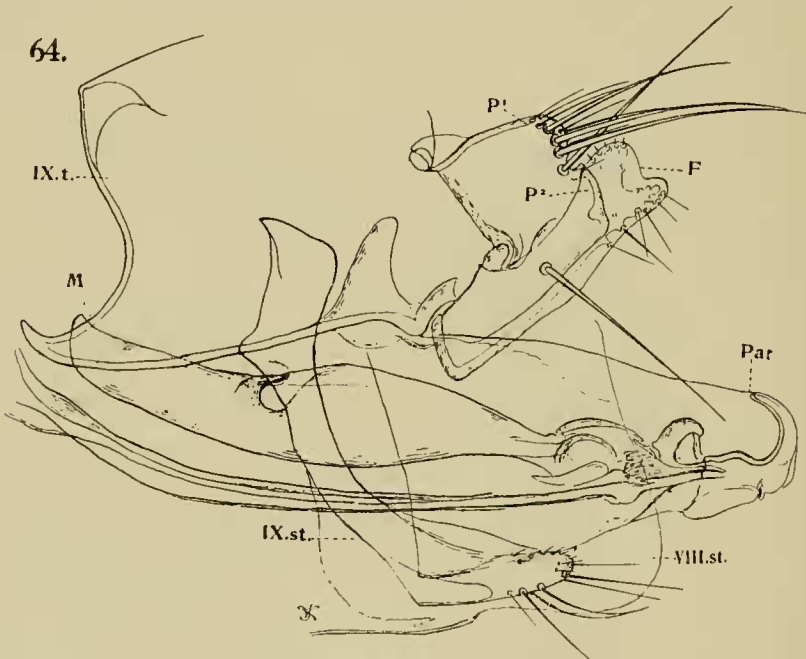


FIG. 64.—*Ctenophthalmus singularis* ♂.

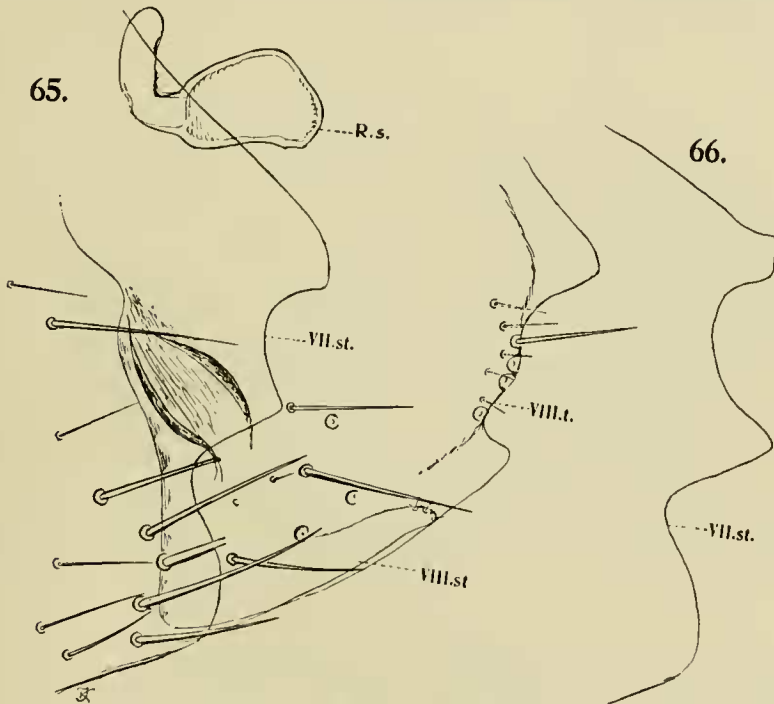
new species almost agrees with *Ct. ansorgei* Roths. 1907, near which it may be placed.

♂♀. There is nothing remarkable in the bristles of the body and legs. Metepimerum in ♂ with 6 or 7 bristles, in ♀ with 6. Apical spines on tergites (both sides together): in ♂ on I 2 or 3, II 2 or 4, III 2, IV 2, V 0 or 1; in ♀ on I to IV 2. Bristles on tergites: in ♂ on III 16, 14 or 15, IV 11 or 15, 14, VII 10 or 13, 14 or 11; in ♀ on III 16 or 21, 15 or 14, IV 15 or 22, 15 or 14, VII 10 or 15, 8. On sternites: in ♂ on III 5, 8, IV 4 or 3, 6 or 8, V 3, 7 or 6, VI 2 or 3, 8, VII 3 or 5, 9 or 12, VIII 17 or 19; in ♀ on III 8 or 11, 8 or 9, IV 8 or 10,

11 or 10, V 5, 10, VI 9 or 6, 10, VII 10 or 13, 14 (in all cases the two sides together).

On dorsal margin of hindtibia 7 notches (inclusive of apical one), 1 to 6 bearing each a pair of bristles; on outer side of hindtibia 6 subdorsal bristles; the longest apical dorsal bristle of hindtibia in ♂ about one-tenth, in ♀ about one-third shorter than first hindtarsal segment.

♂. Dorsal portion of IX. t. (text-fig. 64) less curved forward than in *Ct. ansorgei*, in the second specimen projecting more than in the type (from which our figure is taken), the bay being more strongly rounded than in the figure. Manubrium (M) pointed, curved upwards. Clasper with small apical sinus, which separates the short, rounded, setiferous, dorsal process P¹ from the truncate ventral one P², the two processes about equal in width, the sinus rather narrower



FIGS. 65-66.—*Ctenophthalmus singularis* ♀.

in the paratype than in the type. Movable sclerite F sublinear, three and one-half times as long as apically broad, apex divided by a terminal sinus into a broad dorsal and a narrower ventral projection, both rounded and of nearly the same length, slightly different in the two specimens and on the right and left sides of the body. Ventral arm of IX. st. short, triangular, in middle nearly half as broad as ventrally long (in a straight line from proximal ventral angle to apex), with about 6 longish bristles and a number of small ones in apical and subapical areas. Parameres of penis-armature without external hooks.

♀. VII. st. bisinuate (text-figs. 65, 66), the upper sinus less deep than the lower one, upper projection broader than lower, this above middle of side, nearly or quite as prominent as the upper angle, triangular, with the tip rounded off, upper

projection truncate in second specimen (fig. 66). On VIII. t. 2 or 3 small bristles above stigma on each side, and 8 or 9 on ventral area; at apical margin 2 or 3 close together of which only the upper one is preserved; this evidently much shorter than the bristles below it, a third apical or subapical large bristle (also broken) at apical subventral sinus. Near proximal margin of the segment a very distinct incrassation resembling a pair of rounded brackets, this peculiar thickening about on a level with the dorsal lateral bristles of VIII. t.; from the brackets (a pair on each side of the body) downwards the proximal margin of the segment slightly thickened. Spermatheca with the tail distinctly shorter than the head.

Two pairs from Madangi, Mt. Elgon, Uganda, August 1924 (J. Ford & G. L. R. Hancock), on *Rhabdomis pumilio* (2 ♂♂, 1 ♀) and *Lophuromys aquilus* (1 ♀).
